



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/842,370	04/25/2001	Oren Wiesler	PRI-134XX	6576
207	7590	08/11/2005	EXAMINER	
WEINGARTEN, SCHURGIN, GAGNEBIN & LEOVICI LLP TEN POST OFFICE SQUARE BOSTON, MA 02109			CHEN, CHONGSHAN	
			ART UNIT	PAPER NUMBER
			2162	

DATE MAILED: 08/11/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/842,370

Applicant(s)

WIESLER ET AL.

Examiner

Chongshan Chen

Art Unit

2162

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 25 April 2005.  
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-33 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1-3, 5, 8, 11, 15-22, 24, 27 and 30 is/are rejected.  
7) ☒ Claim(s) 4, 6, 7, 9, 10, 12-14, 23, 25, 26, 28, 29 and 31-33 is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.  
10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_.  
5) ☐ Notice of Informal Patent Application (PTO-152)  
6) ☐ Other: \_\_\_\_\_.

RS

### **DETAILED ACTION**

1. This action is responsive to Amendment filed on April 25, 2005. Claims 1-33 are pending in this Office Action.

#### ***Claim Objections***

2. Examiner suggests the applicant to change the phrase “associated a respective reticle stored in the at least one stocker” in lines 3 and 4 on page 3 of the amendment filed on April 25, 2005 to “associated with a respective reticle stored in the at least one stocker” in order to improve the readability.

#### ***Claim Rejections - 35 USC § 101***

3. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

4. Claims 1-33 rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

5. Claims 1-33 claim an apparatus, but do not explicitly disclose the apparatus is embodied in any hardware. Without the hardware, the claim is at best directed to an arrangement of software, *per se*, and they are rejected under §101 as not being tangible.

#### ***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

Art Unit: 2162

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1-3, 5, 8, 11, 15-22, 24, 27 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lambson et al. (hereinafter "Lambson", "Automated reticle transport and stepper loading", Solid State Technology, V39, n10, p97, Oct. 1996, ISSN: 0038-111X) in view of Conboy et al. (hereinafter "Conboy", US 6,356,804B1) and "PRI Automation Announces New Combination Reticle Stocker", ("PRI", PR Newswire, p9143, Oct 26, 1999).

As per claim 1, Lambson discloses an apparatus for managing data corresponding to a plurality of reticles in a semiconductor manufacturing system comprising:

at least one stocker including a stocker database, a stocker controller communicably coupled to the stocker database and communicably coupled to the reticle management controller, and a plurality of storage locations configured and arranged to store the plurality of reticles, the stocker controller being configured and arranged to store data corresponding to the plurality of reticles stored within the plurality of storage locations within the stocker database (Lambson, page 1-5),

wherein the data associated with the plurality of reticles includes first and second data, portions of the first data being associated with respective ones of the plurality of reticles, and portions of the second data being associated with more than one of the plurality of reticles (Lambson, page 1-5).

Lambson does not explicitly disclose a central reticle database configured and arranged to store data associated with the plurality of reticles; a reticle management controller communicably coupled to the central reticle database, the reticle management controller configured and

Art Unit: 2162

arranged to store data in the central reticle database, and to retrieve data from the central reticle database.

Conboy teaches a central reticle database configured and arranged to store data associated with the plurality of reticles; a reticle management controller communicably coupled to the central reticle database, the reticle management controller configured and arranged to store data in the central reticle database, and to retrieve data from the central reticle database (Conboy, col. 4, line 53 – col. 5, line 22). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the semiconductor manufacturing system of Lambson by incorporating a central reticle database as disclosed by Conboy (Conboy, col. 4, line 53 – col. 5, line 22). The motivation being to enable the semiconductor manufacture to store reticle information in a central database for easy and efficient management.

Neither Lambson nor Conboy explicitly discloses wherein the data associated with the plurality of reticles stored in the central retile database includes first and second data, each of the first and second data including a plurality of data portions, each portion of the first data being associated a respective reticle stored in the at least one stocker, and each portion of the second data corresponding to at least one predetermined data constant associated with the plurality of reticles stored in the at least one stocker, wherein the reticles management controller is configured and arranged to retrieves at least a portion of the data corresponding to the plurality of reticles stored within the stocker database, and to store the retrieved data portion within the central reticle database, and wherein the reticle management controller is further configured and arranged based on one or more portions of the first data associated with the respective reticles stored in the at least one stocker, and one or more portions of the second data corresponding to

Art Unit: 2162

the predetermined data constants associated with the plurality of reticles stored in the at least one stocker.

PRI teaches wherein the data associated with the plurality of reticles stored in the central reticle database includes first and second data, each of the first and second data including a plurality of data portions, each portion of the first data being associated a respective reticle stored in the at least one stocker, and each portion of the second data corresponding to at least one predetermined data constant associated with the plurality of reticles stored in the at least one stocker, wherein the reticles management controller is configured and arranged to retrieve at least a portion of the data corresponding to the plurality of reticles stored within the stocker database, and to store the retrieved data portion within the central reticle database, and wherein the reticle management controller is further configured and arranged based on one or more portions of the first data associated with the respective reticles stored in the at least one stocker, and one or more portions of the second data corresponding to the predetermined data constants associated with the plurality of reticles stored in the at least one stocker (PRI, page 1-2).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the Lambson and Conboy's combined system by storing the data as disclosed by PRI. The motivation being to lower cost and improve the management of reticle inventory (PRI, page 1).

As per claim 2, Lambson, Conboy and PRI teach all the claimed subject matters as discussed in claim 1, and further teach the portions of the first data corresponding to each of the plurality of reticles stored in the central reticle database includes a plurality of reticle identifying data (Lambson, page 1-5, PRI, page 1-2).

As per claim 3, Lambson, Conboy and PRI teach all the claimed subject matters as discussed in claim 2, and further teach the plurality of reticle identifying data includes an attribute identifying the reticle; an attribute identifying the location of the reticle (Lambson, page 1-5, PRI, page 1-2).

As per claim 5, Lambson, Conboy and PRI teach all the claimed subject matters as discussed in claim 1, and further teach the data corresponding to each of the plurality of reticles stored in the central reticle database includes a plurality of reticle history data (PRI, page 1-2).

As per claim 8, Lambson, Conboy and PRI teach all the claimed subject matters as discussed in claim 1, and further teach the data corresponding to each of the plurality of reticles stored in the central reticle database includes a plurality of reticle maintenance data (PRI, page 1-2). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the Lambson, Conboy and PRI's combined reticle management system by incorporating reticle maintenance data as disclosed by PRI. The motivation being to track the reticle lifecycle information for better management and maintenance of the reticle.

As per claim 11, Lambson, Conboy and PRI teach all the claimed subject matters as discussed in claim 1, and further disclose a central system database configured and arranged to store portions of the second data corresponding to system requirements of the plurality of reticles, wherein the reticle management controller is communicably coupled to the central system database, the reticle management controller being configured and arranged to store and to retrieve the system data from the central system database (Conboy, col. 4, line 53 – col. 5, line 22).

As per claim 15, Lambson, Conboy and PRI teach all the claimed subject matters as discussed in claim 1, and further teach a plurality of stockers, each of the plurality of stockers including a stocker controller communicably coupled to the reticle management controller, a stocker database, and a plurality of storage locations configured and arranged to store at least one of the plurality of reticles, the stocker controller configured and arranged to collect at least a portion of the first and second data, and to store the at least a portion of the first and second data within the stocker database, wherein the reticle management controller is configured and arranged to receive at least a portion of the first and second data from each of the plurality of stocker controllers, and to provide at least a portion of the first and second data to each of the plurality of stocker controllers (Lambson, page 1-5, Conboy, col. 4, line 53 – col. 5, line 22, PRI, page 1-2).

As per claim 16, Lambson, Conboy and PRI teach all the claimed subject matters as discussed in claim 1, and further teach a reticle moving system communicably coupled to the reticle management controller, the reticle moving system being configured and arranged to load a reticle at a respective stocker unit and to deliver the loaded reticle to a destination, wherein the reticle management controller is configured and arranged to provide one or more move commands to the reticle move system, the reticle move system being configured and arranged to receive the one or more move commands and being operative to execute the one or more move commands (Lambson, page 1-5, Conboy, col. 4, line 53 – col. 5, line 22, PRI, page 1-2).

As per claim 17, Lambson, Conboy and PRI teach all the claimed subject matters as discussed in claim 16, and further disclose the one or more move commands includes a



Art Unit: 2162

command to store at a second stocker unit a reticle currently stored at a first stocker unit (Lambson, page 1-2).

As per claim 18, Lambson, Conboy and PRI teach all the claimed subject matters as discussed in claim 16, and further disclose the one or more move commands includes a command to retrieve a reticle from a respective stocker unit (Lambson, page 1-2).

As per claim 19, Lambson, Conboy and PRI teach all the claimed subject matters as discussed in claim 16, and further disclose the one or more move commands includes a command to retrieve a reticle from a respective stocker unit, to move the reticle to a first stocker unit different from the respective stocker unit, and to store the reticle at the first stocker unit (Lambson, page 1-2).

Claims 20-22, 24, 27 and 30 are rejected on grounds corresponding to the reasons given above for claims 1-3, 5, 8, 11 and 15-19.

#### *Allowable Subject Matter*

8. Claims 4, 6, 7, 9, 10, 12-14, 23, 25, 26, 28, 29 and 31-33 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

#### *Response to Arguments*

9. Applicant's arguments with respect to claims 1-33 have been considered but are moot in view of the new ground(s) of rejection.

Art Unit: 2162

*Contact Information*


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chongshan Chen whose telephone number is (571) 272-4031.

The examiner can normally be reached on Monday - Friday (8:00 am - 4:30 pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Breene can be reached on (571) 272-4107. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Chongshan Chen  
August 4, 2005

  
JEAN M. CORRIELUS  
PRIMARY EXAMINER